

JOB SATISFACTION AND INTENT TO STAY AMONG NEW RNS:  
DIFFERENCES BY UNIT TYPE

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## ABSTRACT

**Purpose:** Newly licensed registered nurses (NLRNs) are the pipeline of the nursing workforce, which will fall short of needs in the coming years. Within two years of employment one in three NLRNs are estimated to leave their first job. Previous studies found nurse job satisfaction varies by unit type, and predicts intent to stay and turnover. This study describes NLRNs and examines unit type differences in NLRN job satisfaction and intent to stay in their current position.

**Theoretical Model:** An adaptation of Price and Mueller's RN Turnover Model is used, which posits that hospital, unit, and RN factors effect RN job satisfaction, which in turn affects intent to stay, the best predictor of turnover. Researchers have found empirical support for the relationships depicted.

**Methods:** A secondary analysis was performed using cross-sectional data from the on-line, 2013 National Database of Nursing Quality Indicators (NDNQI) RN Survey. Our study sample was limited to 6,461 NLRNs in selected unit types in 259 general and pediatric hospitals in 43 states. Analysis included descriptive statistics as well as ANOVA and Chi Square procedures testing unit type differences among NLRN reports of job satisfaction and intent to stay.

**Results:** Most NLRNs are beginning their nursing career with adults, on either medical-surgical, step-down, or critical care units. Significant differences among unit types were found in NLRN reports of both job satisfaction and intent to stay in their current position. NLRNs in pediatric units were significantly more satisfied than those in medical-surgical, step-down, or peri-operative units. Overall, 75% intend to stay, with only NLRNs working in adult medical-surgical (69%) and step-down units (70%) reporting lower percentages.

**Discussion:** Findings from NLRNs in our study support work of previous researchers in both the level of intent to leave among NLRNs, and unit types in which RNs in general report the highest and lowest levels of job satisfaction and intent to leave.

**Conclusions:** By guiding NLRNs to units with better job satisfaction for their initial position, findings may be used to help reduce early exits of NLRNs and improve successful transitions into practice. Unit managers may use results to evaluate effects of orientation programs. Researchers should compare factors influencing job satisfaction and intent to stay on adult medical-surgical units to pediatric units. Further studies should explore effects of RN residency programs on NLRN transitions into practice.

## INTRODUCTION

New RNs are the pipeline of the nursing workforce, which is presently predicted to fall short of needs in the coming years (Kovner, Brewer, Greene, & Fairchild, 2009). Yet the transition into practice is difficult, as evidenced by high turnover rates of RNs in their first year or two of practice. Bowles & Candela (2005) reported finding 30% of new RNs left their first job within a year of practice. New RNs enter the profession from a variety of educational programs with a wide range of skills and confidence in their new role. Approximately 90% begin their career in a hospital setting, in which nursing shortages, high patient acuity, and scarce resources are common. Residency programs have been strongly recommended to address the transition needs of new RNs (Institute of Medicine, 2011). However, such programs may not be widely available as the costs are left solely to hospitals, in contrast to funding from the Center for Medicare and Medicaid Services for physician and pharmacy programs (Goode, Lynn, Krsek, & Bednash, 2009).

Researchers have been examining the transition of new RNs with renewed interest this century due to the predicted nursing workforce shortages. In their 2006-2012 panel study, Kovner, Brewer, Fatehi, and June (2014) found that high rates of turnover among new RNs continue. Kramer, Maguire, Halfer, and Schmalenberg, (2012) found better outcomes among new RNs whose first job was on a hospital nursing care unit with very healthy nursing work environments. Previously, Boyle et al. (2006) had found differences in job satisfaction by type of unit among RN unit workgroups without regard for tenure of members, which suggests that unit type may also be important in the transition of new RNs. Collectively, these findings confirm the continued need to understand factors that

influence the job satisfaction and intent to stay of new RNs in hospitals today. In this study, we examined unit type differences among the job satisfaction and intent to stay of new RNs.

## **REVIEW OF LITERATURE**

In this section we will present an overview of the purpose, conceptual framework, methodology, and major findings of quantitative studies examining NLRN outcomes conducted in the United States and published since 2007. We selected studies and research programs that were guided by the purpose of examining NLRN job satisfaction, intent to stay, and turnover, as well as factors affecting these outcomes. Kovner and colleagues conducted the RN Work Project, a rigorous ten-year panel study designed to quantify NLRN turnover rates and trends (Brewer, Kovner, Greene, Tukov-Shuser & Djukic, 2011; Brewer, Kovner, Yingrengreung, & Djukic, 2012; Kovner, Brewer, Fairchild, Poorima, Kim, & Djukic, 2007; Kovner, Brewer, Fatehi, & Jun, 2014; Kovner, Brewer, Fatehi, & Katigbak, 2014; Kovner, Brewer, Greene, & Fairchild, 2009; Kovner & Djukic, 2009). Kramer and colleagues conducted a 7-study, 5-year research program designed to examine the effects of healthy unit work environments and residency programs on NLRN retention rates and transitions (Halfer, Graf, & Sullivan, 2008; Kramer, Brewer, & Maguire, 2011; Kramer, Halfer, Maguire, & Schmalenberg; Kramer, Maguire, & Brewer, 2011; Kramer, Maguire, Halfer, Brewer, & Schmalenberg, 2011; Kramer, Maguire, Halfer, & Schmalenberg, 2012; Kramer, Maguire, Halfer, Budin, Hall, et al., 2012).

Several studies were reviewed that evaluated the effects of a nurse residency program. Outcomes from the Versant program were examined by Beecroft, Dorey, and Wenten, (2008), Trepanier, Early, Ulrich, and Cherry (2012) and Ulrich, Krozek, Early, Ashlock,

Africa, and Carman (2010), while outcomes from the residency program developed by the University HealthSystem Consortium (UHC) and the American Association of Colleges of Nursing (AACN) were examined by Goode, Lynn, Krsek, and Bednash, (2009). The remaining studies examined factors that influence NLRNs intent to stay (Scott, Engelke, & Swanson, 2008; Unruh & Zhang, 2013; Unruh, Zhang, & Chisolm 2014; Wu, Fox, Stokes, & Adam, 2012),

Two conceptual frameworks were used in these investigations, a turnover model and the systems research organizing model. The Brewer-Kovner Turnover Model (Kovner et al., 2007) is an extension of the Price Turnover Model (see Conceptual Framework section below for a description of the Price Turnover Model). The Systems Research Organizational Model was used by Kramer and colleagues (Kramer, Halfer, Maguire, & Schmalenberg, 2012). This model is based on the American Academy of Nursing Quality Health Outcomes Model and Donabedian's structure, process, outcome paradigm, and posits that characteristics of the organization (the context), the unit (the focus of action), and the new graduate (the client) interact with each other and influence safety and quality outcomes.

Study designs included both cross-sectional and longitudinal. Brewer and Kovner used a panel study design for their rigorous examination of trends in NLRN turnover rates (Kovner et al., 2007; Kovner, Brewer, Greene, & Fairchild, 2009; Brewer et al., 2011; Brewer, Kovner, Yingrengreung, & Djukic, 2012; Kovner, Brewer, Fatehi, & Katigbak, 2014).

Researchers obtained samples from state licensing boards, Magnet hospitals, Academic Medical Centers, multisite RN residency programs, and single hospitals. Kovner and

colleagues gathered their sample from state licensing boards (Kovner et al., 2007; Kovner, Brewer, Greene, & Fairchild, 2009; Brewer et al., 2011; Brewer, Kovner, Yingrengreung, & Djukic, 2012; Kovner, Brewer, Fatehi, & Katigbak, 2014). They followed three panels of NLRNs, beginning with 3266 NLRNs in 60 sites in 34 states licensed in 2004-2005, and ending with 1613 NLRNs in 23 sites in 14 states. Kramer and colleagues obtained samples from Magnet hospitals, which ranged from 5316 NLRNs in 28 hospitals (Kramer, Halfer, Maguire, & Schmalenberg, 2012) to 468 NLRNs in 17 hospitals (Kramer, Brewer, & Maguire, 2012). Samples in other studies examining nurse residency programs ranged from 329 NLRNs to 665 NLRNs, collecting their sample from individual state licensing boards or American Medical Centers (AMCs) (Goode, Lynn, Krsek, & Bednash, 2009; Trepanier, Early, Ulrich, & Cherry, 2012). The years for sampling ranged from 2004-2009. The remaining articles sample size varied from 414 to over 6000 NLRNs with samples from the years 1999-2008 (Beecroft, Dorey, & Wenten, 2008; Scott, Engelke, & Swanson, 2008; Ulrich, et al., 2010; Wu, Fox, Stokes, & Adam, 2012; Unruh & Zhang, 2013; Unruh, Zhang, & Chisolm 2014). The large sample of studies we reviewed enabled us to gather a significant understanding of the information we researched.

The instruments utilized to assess work environment during these studies were rather consistent throughout the studies. Kovner and colleagues (Kovner, et al., 2007) developed an instrument for this work, which was also used by Unruh and Zhang (2013). Kramer and Schmalenberg used the Essentials of Magnetism tool for their research (Kramer, Halfer, Maguire, & Schmalenberg, 2012; Kramer, Brewer, & Maguire, 2013).

The primary dependent variables that were measured were intent to stay, turnover, and satisfaction for NLRNs. The primary independent variables measured in these articles varied. For Kovner and Brewer's studies, they looked at NLRNs demographics, their work attitudes about work environment, and intent to stay (Kovner et al., 2007; Kovner, Brewer, Greene, & Fairchild, 2009; Brewer et al., 2011; Brewer, Kovner, Yingrengreung, & Djukic, 2012; Kovner, Brewer, Fatehi, & Katigbak, 2014). The studies examining residency programs measured the quality of orientation (Goode, Lynn, Krsek, & Bednash, 2009; Trepanier, Early, Ulrich, & Cherry, 2012). Lastly, Kramer and Schmalenberg viewed unit types and the quality of work environment as their independent variables (Kramer, Halfer, Maguire, & Schmalenberg, 2012; Kramer, Brewer, & Maguire, 2013).

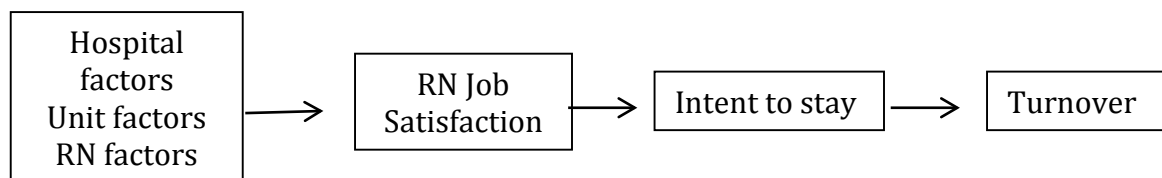
Kovner found a range of turnover from 13 to 18 percent after 1 year and 26 percent after 2 years (Kovner et al., 2007; Kovner, Brewer, Greene, & Fairchild, 2009; Brewer et al., 2011). Kramer and Schmalenberg found that the NLRNs on units identified as having work environments needing improvement (WENI) had increased rates of turnover compared to NLRNs on units with very healthy work environments (VHWEs), who showed high retention rates (Kramer, Halfer, Maguire, & Schmalenberg, 2012; Kramer, Brewer, & Maguire, 2013). The studies examining NLRNs in residency programs found as a majority that those NLRNs who were a part of a residency program showed decreased turnover rates.

This research identified factors associated with NLRN intent to stay and turnover, but it did not examine unit type differences. This research supports the further study that we conducted, because it shows that NLRN turnover rates remain high and need further

investigation. Our research took a closer look at NLRN intent to stay, examining unit type differences in hopes of giving better insight for NLRNs to help determine where they would be most satisfied while seeking a job as a new hire registered nurse. The purpose of this study is to describe new RNs, and examine unit type differences in their job satisfaction and intent to stay.

## CONCEPTUAL FRAMEWORK

The conceptual framework of this study is an adaptation of the Price-Mueller Nurse Turnover Model (Price & Mueller, 1981; Price & Mueller, 1986). Price, Mueller, and colleagues developed and refined a comprehensive model of nurse turnover that has generated a large body of research including tests of model extensions (Hinshaw, Smeltzer, & Atwood, 1987; Taunton et al., 1997). The Brewer-Kovner Turnover Model is also an extension of the Price-Mueller Nursing Turnover Model (Kovner et al., 2007). Studies based on this model and its extensions have provided strong evidence of the causal order illustrated below.



AIMS

The purpose of the research reported here is to examine intent to stay among new RNs using variables identified in our adaptation of the Price-Mueller Turnover model. The following three aims guided this study:

1. Describe types of hospitals and units in which newly licensed RNs work.



2. Describe the characteristics, job satisfaction, and intent to stay of new graduate RNs.
3. Explore differences in perceptions of quality of care delivered, job satisfaction, and intent to stay of new graduate RNs among unit types.

## METHODOLOGY

This is a secondary analysis of cross-sectional data from the 2013 National Database of Nursing Quality Indicators™ (NDNQI®) RN Survey. The American Nurses Association established the NDNQI in 1998 in response to concerns about RN job satisfaction, RN staffing, and quality of patient care within acute care hospitals. In 2013, NDNQI membership included 1986 hospitals from all states and the District of Columbia, representing approximately 1/3 of all hospitals within the United States. Hospitals join NDNQI to support quality improvement efforts, to meet regulatory requirements, and to support efforts to gain and maintain the American Nurses Credential Corporation's Magnet® designation.

## SAMPLE AND SETTING

In 2013, 888 NDNQI member hospitals volunteered to participate in the annual RN Survey. Hospitals selected between survey instrument options including either the Practice Environment Scale or Job Satisfaction Scale. Responses were received from 315,851 RNs in 18,113 units, for a 71% unit response rate. The NDNQI RN Survey eligibility criteria limits participation to RNs whose position requires a minimum of 50% direct patient care and who have been a member of their unit or RN workgroup a minimum of three months.

In the research reported here, we limited our sample to NLRNs who had been employed in nursing one year or less. Although other researchers have considered RNs who were up to three years post initial licensure as NLRNs, we chose the more restricted timeframe of one year or less. Because data were not available to indicate whether our selected sample remained in their first position or not, we choose the more restricted timeframe to reduce the possibility of including NLRNs who had left their first unit between year one and two.

We limited our sample to RNs who were educated and employed in the United States, who worked in general or pediatric hospitals, who worked in unit types in which RNs most commonly begin practice, and who entered practice with BSN as the highest education or RN as the highest license. Unit types in which 90% of the NLRN respondents in the 2013 NDNQI RN Survey and which we therefore included in the sample were adult critical care units, adult step-down units, combined medical-surgical units, pediatric units, obstetric and neonate units, peri-operative units, and emergency departments. These sample limits controlled for factors that lay outside our interest. Finally, we also limited the sample to NLRNs in hospitals that had selected a survey option with job satisfaction scales, which included the job satisfaction variable of interest to our study.

## **MEASURES**

Study measures included hospital characteristics, unit type, NLRN characteristics, and NLRN attitudes. These measures were chosen based on our conceptual framework, our literature review, and the data available for this secondary analysis.

### *Hospital Characteristics*

Hospital characteristics included hospital teaching status, bed size, ownership, metropolitan area, and Magnet status. Upon joining the NDNQI, site coordinators enter hospital characteristic data into the secure member website. NDNQI staff then confirm these data using external data sources, such as, for Magnet status, the American Nurses Credentialing Corporation (ANCC) website. In addition, member site coordinators must confirm hospital characteristics quarterly to capture any changes in status over time.

### *Unit Type*

NDNQI unit types are based on patient acuity, age of patients, and/or type of care provided. Unit types were originally developed by NDNQI as a form of risk stratification for comparison of nursing-sensitive patient outcomes, and were subsequently expanded over time as new indicators were developed for additional areas. By generally reflecting common nursing department organizations, as well as patient acuity, age, and/or care, unit type comparison data are considered most useful to members, according to feedback from site coordinators. Site coordinators enroll units into the NDNQI and assign the unit type based on standardized guidelines. NDNQI staff then conducts a telephone conference with the site coordinator to review and confirm each unit type assignment. Unit type classifications are updated as needed as unit patients and care provided change occur over time.

### *NLRN characteristics*

NLRN characteristics were collected from RNs participating in the 2013 NDNQI RN Survey, and included age, gender, race/ethnic group, highest level of education, usual shift worked, shift rotation, and professional tenure. Professional tenure was used to identify

the study sample. The question asked was: How many years have you worked as an RN in the United States? The response options included: <3 months, 3-6 months, 7-11 months, 1 year, 2 years, .....54 years, =>55 years. For this study, we included participants that selected the response options of 3-6 months, 7-11 months, or 1 year.

### *NLRN attitudes*

NLRN attitudes, collected from RNs participating in the 2013 NDNQI RN Survey, included opinions regarding influence over work schedule, adequacy of orientation, quality of the care delivered on their unit, job satisfaction, and intent to stay in their current position. The items used to measure these attitudes are described below.

### *Intent to stay*

NLRNs were asked “What are your job plans for the next year?” Response options include stay in my current position, stay in direct patient care but in another unit in the hospital, stay in direct patient care but outside this hospital, leave direct patient care but stay in the nursing profession, leave the nursing profession for another career, and retire. In the study reported here, we calculated the percent of NLRNs who selected the response option “stay in my current position.” This item was developed for the RN Survey by NDNQI staff.

### *Job satisfaction*

NLRNs were asked to indicate their level of agreement with the phrase “I am fairly well satisfied with my job.” The six-point Likert-type response options ranged from strongly disagree (1) to strongly agree (6), with a higher score being a more positive rating. This

item was developed as part of the modification and addition of items from Brayfield and Roth's Job Enjoyment scale (Brayfield & Rothe, 1951; Taunton et al., 2004). The Job Enjoyment scale is a general measure of job satisfaction of any employee. This item was selected because it measures RN job satisfaction at the individual level, while other job enjoyment items are unit level measures.

### *Quality of care*

NLRNs were asked to rate quality of care with the following question: In general, how would you describe the quality of nursing care delivered to patients on your unit? A four-point Likert-type response options included poor (1), fair (2), good (3), and excellent (4), with a higher score being the more positive rating. This item was developed by Dr. Aiken and colleagues (Aiken, Clarke, & Sloan, 2002; Aiken & Patrician 2000) and included in the NDNQI RN Survey with permission from Dr. Aiken.

### *Adequacy of orientation*

NLRNs were asked to rate the quality of their orientation with the following question: "I received an orientation that adequately prepared me for my current position." The six-point Likert-type response options ranged from strongly disagree (1), to strongly agree (6), with a higher score being a more positive rating. This item was developed for the RN Survey by NDNQI staff.

### *Influence over schedule*

NLRNs were asked to rate their influence over their schedule with the following item: "How much influence do you have over the hours or schedule that you work?" The five-

point Likert-type response options included very little (1), little (2), moderate (3), much (4), and very much (5), with a higher score being a more positive rating. This item was developed for the RN Survey by NDNQI staff.

## **DATA COLLECTION PROCEDURES**

NDNQI data are collected on-line through the member website. Upon joining NDNQI, each hospital identifies a site coordinator who enters hospital characteristics, enrolls nursing units through the NDNQI member website, and serves as the primary point of contact with NDNQI. NDNQI offers the annual, web-based survey for a 3-week period during the months of April, May, June, August, September, and October. Site coordinators prepare for the RN Survey at the member website by completing the following tasks: register annually for the RN Survey, select a collection month, obtain a standardized data collection protocol and unique hospital identification code, select nursing units to participate in the survey from a list of their units enrolled in NDNQI, and enter the number of RNs on each unit that are eligible for the RN Survey.

Site coordinators publicize the survey internally, offer incentives within protocol guidelines, and distribute two reminder postcards during the 3-week data collection period. Prior to the survey, site coordinators distribute an invitation letter from their hospital's nursing administration listing the hospital's unique identification code RNs must enter on the web to participate in the survey. RNs can complete the survey from any computer (e.g., home computer) with internet access.

## **ETHICAL CONSIDERATIONS**

Institutional review board (IRB) approval for protection of human rights for NDNQI and its component parts was provided by the University of Kansas Medical Center. All eligible RNs received an invitation letter from NDNQI describing the survey, informing them of procedures in place to protect their anonymity and confidentiality, including participant names are not collected, responses are submitted directly to NDNQI, participant demographics are only provided to their hospital aggregated to the hospital level, survey results are only provided to their hospital aggregated to the unit level for units with 5 or more responses, participation is voluntary, and jobs will not be affected if they choose not to participate. In addition, the letter from NDNQI includes contact information for NDNQI and the University of Kansas Medical Center's IRB.

To participate in the NDNQI RN Survey, hospital site coordinators are required to acknowledge they accept responsibility for (1) distributing the NDNQI survey invitation letter, (2) ensuring that jobs of eligible RNs are not affected by participation or nonparticipation, (3) ensuring that RNs are not monitored or watched while completing the survey, and (4) ensuring that names of RNs who respond or do not respond to the survey are not listed or tracked in any way.

## **DATA ANALYSIS**

All NDNQI data are maintained as a relational database in a secure Microsoft Structured Query Language (SQL) Server data repository. Hospital characteristic, unit type, and RN Survey data are collected and stored in separate SQL tables. Data were extracted and then merged into one Statistical Program for Social Sciences (SPSS 20.0) data file for analysis.

Raw, individual level survey data were examined for missing items and logical consistency of responses to interdependent items. RN responses were deleted that did not include any responses to PES items. Logically inconsistent responses to inter-dependent items (e.g., age and tenure) were deleted. Prior to analysis, negatively worded items were reverse coded so that all items were positively oriented. All data had relatively normal distributions.

Descriptive statistics, including counts, percentages, means, and standard deviations, were used to address Aims 1 and 2 of this study. Aim 1 was to describe the types of hospitals and units in which NLRN work, and Aim 2 was to describe the demographic characteristics of NLRNs, as well as their reported job satisfaction and intent to stay in their current job. Aim 3, to explore unit type differences in NLRN job satisfaction and intent to stay, was explored using ANOVA and Chi Square procedures. Differences in job satisfaction were examined with ANOVA procedures. Because intent to stay in the current position were captured as yes or no responses, unit type differences were examined using Chi Square. An alpha level of  $P \leq 0.05$  was used for tests of statistical significance.

## RESULTS

### **NLRN HOSPITAL AND UNIT TYPES**

The types of hospitals and units in which our sample of NLRNs were found to be working are described below, addressing study Aim 1. Our study sample of new RNs worked in a total of 259 hospitals (see Table 1). In the hospitals in our sample, NLRNs were found in selected unit types, all hospitals did not include all unit types or NLRNs in every unit type. NLRNs were found in adult medical-surgical in most, or 230 of the 259



hospitals, emergency department in 148 hospitals. Adult critical care units were found in approximately half, or 138 hospitals, obstetrics and neonate in 127 hospitals, adult step-down in 111 hospitals, and perioperative in 102 hospitals, and pediatrics in only 60.

Our sample included 250 general hospitals and 9 pediatric hospitals. All 9 pediatric hospitals included NLRNs in pediatric units, 7 hospitals included NLRNs in obstetric and neonate units, 7 hospitals included NLRNs in EDs, and only 3 hospitals included NLRNs in peri-operative units. The majority of the hospitals in the sample were non-teaching, between 100 and 299 beds in size, located in a metropolitan area, and were not designated as Magnets.

Our study sample included a total of 6,461 NLRNs (see Table 2). Overall, 72% worked in adult units, including 3,072 in adult medical-surgical units, 811 in adult step-down units, and 764 in adult critical care. The remaining NLRNs worked in obstetrics and neonate (549 NLRNs), emergency departments (520 NLRNs), 473 in pediatric units, and 272 in peri-operative units. Nearly 95 percent of new-graduates worked in general, rather than pediatric, hospitals. While a majority of the hospitals were in the 100-299 bed range, hospitals of this size represented only 38% of NLRN, with 32% found in hospitals with +>500 beds. Corresponding to hospital characteristics, the majority of NLRNs were found in metropolitan and non-Magnet hospitals, although more NLRNs were found in teaching rather than the more numerous non-teaching hospitals.

## **NLRN CHARACTERISTICS**

The characteristics of NLRNs in the study sample, as well as their reported job satisfaction and intent to stay, are described below, addressing study Aim 2.

Table 3 displays the number and percentage of each RN characteristic overall and for each unit type. The percentage of NLRN who are female was 88% overall, varying by unit type from 78% in emergency and 80% in adult critical care to 94% in obstetrics and neonate and in pediatrics and 98% in obstetrics and neonate. Most NLRNs in the sample (79%) were White/Non-Hispanic, varying from 76% in adult medical surgical to 85% in pediatrics. The majority of NLRNs (65%) obtained their BSN. The proportion of BSN educated NLRNs was highest in pediatrics (78%) and adult critical care (76%), and lowest in peri-operative (57%), emergency (60%) and adult medical surgical (61%). Overall, 75% of NLRNs reported they intend to stay in their current position over the next year. NLRNs in adult medical surgical (69%) and step-down (70%) units reported the lowest intention to stay, while NLRNs in adult critical care, obstetric and neonate, and peri-operative reported the highest at 86% each.

Table 4 displays the mean score for individual RN characteristics overall and by unit types. The mean age of the sample overall was 28 years, and ranged from 27 in pediatrics to 30 in peri-operative units. Overall, NLRNs rated the quality of care delivered on the unit in general to be good (Mean=3.41), with the exceptions being NLRNs in obstetrics and neonate (Mean=3.57), adult critical care (Mean=3.61), and pediatrics (Mean=3.67) who rated the quality of care as excellent. Overall, NLRNs rated their influence over their schedule as moderate (Mean=3.24), with the only exception being NLRNs in peri-operative who rated their influence as little (Mean=2.43). Overall and within all unit types, NLRNs agreed that their orientation was adequate. Overall, NLRNs agreed they were satisfied with their job (Mean=4.58), with the only exception being adult medical-surgical, who only somewhat agreed (Mean=4.45).

## UNIT TYPE DIFFERENCES

Unit type differences in NLRN reported job satisfaction and intent to stay in their current position are described below, addressing study Aim 3. Unit type differences are also described for NLRN perceptions of quality of care delivered on their unit and the adequacy of their orientation in preparing them for their current position.

### *Differences Among Unit Types in Mean Rates of Quality of Care*

A one-way analysis of variance was conducted to evaluate the relationship between new RNs rating of quality of care between different unit types. The independent variable included unit types and 7 unit types were included. The dependent variable was the new RNs rating of quality of care. The ANOVA was significant,  $F(6, 6441) = 39.04, p = .000$ . The strength of the relationship between the new RNs rating of quality of care and the unit type they worked on, as assessed by the partial eta squared results, was small, with the unit types accounting for 4% of the variance of the dependent variable.

Follow-up tests were conducted to evaluate pairwise differences among the means (see Table 5). The results of these tests, as well as the means and standard deviations for the seven unit types, are reported in Table 5. Pediatrics and critical care were significantly different than perioperative, ED, step-down, and medical-surgical. OB was significantly different than ED, step-down, and medical-surgical. Peri-op was significantly different than medical-surgical. There was a significant difference across the 7 different unit types regarding quality of care, depicted by the ANOVAs with Bonferri post hoc. All RNs rated between the good and excellent range of 3-4 when describing the quality of care they provided. The ANOVA showed that NLRNs working in pediatrics, critical care, and OB were

the most satisfied compared to step down and medical-surgical who were the least satisfied. Specifically, pediatrics ranked the highest in quality of care (t-score 3.67) and medical-surgical graded the lowest (t-score 3.34).

#### *Differences Among Unit Types in Mean Rates of Adequate Orientation*

A one-way analysis of variance was conducted to evaluate the relationship between new RNs rating of adequacy of orientation between different unit types. The independent variable included unit types, which included 7 different unit types. The dependent variable was the new RNs rating of adequacy of orientation. The ANOVA was significant,  $F(6, 6392) = 6.80, p = .000$ . The strength of the relationship between the new RNs rating of adequacy of orientation and the unit type they worked on, as assessed by the partial eta squared results, was small, with the unit types accounting for 1% of the variance of the dependent variable.

Follow-up tests were again conducted to evaluate pairwise differences among the means. The results of these tests, as well as the means and standard deviations for the seven unit types, are reported in Table 6. All unit types were significantly better than perioperative regarding adequacy of orientation. Pediatrics was significantly better than both medical-surgical and perioperative. Significance across the 7 unit types for adequate orientation was not as marginal, but still yielded some substantive results. All NLRNs ANOVA results showed that they categorized between tend to agree and agree for adequate orientation based on unit type. The results from this ANOVA showed that NLRNs working in pediatrics, critical care, and step down had the best orientation; whereas, medical-surgical and perioperative had the lowest levels of orientation. Overall, pediatrics reported

the highest adequacy of orientation (t-score 5.24) and perioperative showed the lowest (t-score 4.80).

#### *Differences among Unit Types in Mean Rates of Job Satisfaction*

A final one-way analysis of variance was conducted to evaluate the relationship between new RNs rating of job satisfaction among different unit types. The independent variable included unit types, which included 7 different unit types. The dependent variable was the new RNs rating of job satisfaction. The ANOVA was significant,  $F(6, 6451) = 21.12$ ,  $p = .000$ . The strength of the relationship between the new RNs rating of job satisfaction and the unit type they worked on, as assessed by the partial eta squared results, was small, with the unit types accounting for 2% of the variance of the dependent variable.

Follow-up tests were again conducted to evaluate pairwise differences among the means. The results of these tests, as well as the means and standard deviations for the seven unit types, are reported in Table 7. Pediatrics was significantly better than perioperative, step down, and medical-surgical concerning job satisfaction. OB, critical care, and ED were significantly better than both step down and medical-surgical. Differences between unit types in mean rates of job satisfaction were significant. Results for this test showed pediatrics, OB, and critical care produced the highest job satisfaction while its counterparts, step down and medical-surgical, constructed the lowest job satisfaction of the 7 unit types. The mean data reported from this ANOVA for the seven unit types fell into tend to agree or agree. As a whole, pediatrics ranked the highest of the 7 unit types (t-score 4.86) and medical-surgical scored the lowest (t-score 4.45).

#### *Unit type Differences in Intent to Stay in Current Position*

A Chi Square test was performed to determine intent to stay across the seven unit types. The Chi Square was significant,  $\chi^2 (1,6) = 190.552, p \leq 0.000$ . The independent variable was the seven selected unit types and the dependent variable was the new RNs intent to stay in their current position. No follow-up tests were conducted. Overall, perioperative, OB, and critical care reported the highest intent to stay while step-down and medical-surgical reported the lowest.

Overall, medical-surgical units are home to nearly half of new RNs after graduation and were found in 230 of 259 hospitals. Over 90% of NLRNs worked in general hospitals, and the majority of NLRNs were found in the metropolitan area. Most newly licensed RNs were BSN prepared, white and female. The ratio of women to men varied throughout the units with the ED displaying the lowest percentage of women at 78. Critical care NLRNs perceived they had the highest control over their schedule with perioperative having the lowest. Amongst the 7 unit types, pediatrics demonstrated the highest level of job satisfaction, quality of care in general, and adequacy of orientation. Medical-surgical scores were the lowest of the 7 unit types for job satisfaction and quality of care. Perioperative exhibited the lowest score in adequacy of orientation across the 7 units. Perioperative, OB, and critical care reported the highest levels of intent to stay while medical-surgical reported the lowest.

## DISCUSSION

This study supports previous findings that NLRNs are currently leaving their first job at a high rate. This research furthers previous studies by identifying unit level variations for new graduate RNs leaving their initial job. There is a good amount of research describing

job satisfaction and quality of care, but not specific to unit types in which new graduate RNs work. As mentioned previously, these results are important because NLRNs help set the platform for providing healthcare to future generations.

We found that new licensed RNs display the highest job satisfaction working in pediatric unit types. This finding supports previous research that has shown pediatrics have the highest levels of satisfaction for nurses in general. It furthers this evidence by showing that this satisfaction is evident upon entry into practice, not several years down the road. This research also showed that NLRNs working in medical-surgical units have the lowest job satisfaction. This finding is also congruent with previous research.

We found intent to stay is associated with unit type, ability to deliver quality care, and receiving an adequate orientation. Units reporting high level of job satisfaction also reported high levels of perceived quality of care delivered. It is likely that when nurses are satisfied they feel that the care they provide is positively impacting the patients being cared for. This is evident through our results because pediatrics, OB, and critical care reported the highest levels of job satisfaction and quality of care delivered. Similarly, step down and medical-surgical scored lowest in job satisfaction and quality of care delivered. Based on these findings, it is probable that increasing job satisfaction on a unit would increase quality of care as well.

Findings also show that around 60 percent of NLRNs begin their career in an adult medical-surgical or telemetry unit. This means that approximately 3 out of 5 new nurses are starting their nursing career on units that display the lowest job satisfaction, quality of care, and intent to stay of these 7 unit types. After one year step-down nurses report a 70

percent intent to stay and medical-surgical 69. With intent to stay being a large predictor of nurse turnover, these findings support previous research findings that identify these two unit types as having the highest levels of turnover.

Our results also show that most units with high orientation levels are more satisfied with their jobs and perceive their quality of care delivered to be higher. The main exception to this finding was step down units. They ranked 3<sup>rd</sup> in adequacy of orientation and 6<sup>th</sup> in job satisfaction. We believe this may be due to the high level of orientation required to develop a sufficient understanding of their job and the tasks it required. This may cause the new RN to have a higher level of orientation because of the extensive time and explaining necessary for this unit type. However these NLRNs show lower levels of job satisfaction. This could be due to the high work demands and increased patient load with patients at an intermediate acuity level. This causes these RNs to perform a great deal of tasks, similar to that of a critical care nurse, but with lower patient acuity levels, while juggling close to the same patient load as a medical-surgical nurse.

#### LIMITATIONS AND RECOMMENDATIONS/CONCLUSIONS

Limitations: Study was limited to hospitals using the NDNQI RN survey, hospitals in the US, RNs employed one year or less, and general and pediatric hospitals, limiting generalizability of the findings.

Understanding these results informs the new graduate RN about the current perceived job satisfaction level on the unit in which they may be employed. For NLRNs, this allows for a broader understanding beyond job satisfaction of what to expect for each unit type and the weaknesses of the varying units. For example, if a NLRN desired to have control



over their schedule but was not concerned about job satisfaction this data shows they might not want to go into pediatrics. This study also informs unit managers on areas that need improvement. For managers, this draws attention to the need to improve certain units to increase NLRN's perceptions and ultimately facilitate increased retention and satisfaction. This information also gives NLRNs and managers a baseline for comparison of many important characteristics that help determine turnover from unit to unit. With this information NLRNs can compare units of interest in hopes to start practice in a unit that best aligns with their wants and needs. This study also allows managers to see how they rank compared to other units, which could prompt managers to adopt strategies from other units to increase NLRN intent to stay.

Residency programs have yielded results showing they increase nurse retention. Recommendations for future research might explore the effects of hospitals with residency programs on intent to stay and compare those findings to hospitals without residency programs. Future research could also explore frequency of residency programs by unit type. This would show how these programs affect intent to stay by unit.

## APPENDIX A

Table 1. Number of Hospitals by Hospital Characteristic and Unit Type

Hospital Characteristic	Number of Hospitals							
	Total	Adult Critical Care	Adult Step Down	Adult Medical Surgical	Obstetrics and Neonate	Peds	Peri-op	ED
Total	259	138	111	230	127	60	102	148
Hospital Type								
General	250	138	111	230	120	51	99	141
Pediatric	9	0	0	0	7	9	3	7
Hospital Bed Size								
1-99	56	13	13	41	18	1	17	21
100-199	87	39	31	79	37	20	32	47
200-299	50	30	22	45	29	13	20	31
300-399	28	22	15	27	15	8	9	17
400-499	15	14	12	15	8	7	7	12
>=500	23	20	18	23	20	11	17	20
Hospital Teaching Status								
Academic								
Medical Center	22	20	17	21	18	12	16	16
Teaching	101	62	39	91	51	34	37	61
Non-Teaching	136	56	55	118	58	14	49	71
Metropolitan Status								
Non-Metropolitan	4	0	1	2	1	0	0	2
Micropolitan	38	18	12	32	18	7	17	19
Metropolitan	217	120	98	196	108	53	85	127
Magnet Status								
Magnet	71	46	44	66	43	17	38	43
Non-Magnet	188	92	67	164	84	43	64	105

Table 2. Number of Newly Licensed RNs by Hospital Characteristic and Unit Type

Hospital Characteristic	Number of NLRNs							
	Total	Adult Critical Care	Adult Step Down	Adult Medical Surgical	Obstetrics and Neonate	Peds	Peri-op	ED
Hospital Type	6461	764	811	3072	549	473	272	520
General	6137	764	811	3072	494	243	264	489
Pediatric	324	0	0	0	55	230	8	31
Hospital Bed Size								
1-99	289	22	30	143	36	3	25	30
100-199	1208	74	118	652	106	89	60	109
200-299	1243	118	119	535	128	182	32	129
300-399	959	164	93	507	67	12	29	87
400-499	668	81	141	292	53	28	21	52
>=500	2094	305	310	943	159	159	105	113
Hospital Teaching Status								
Academic								
Medical Center	1834	295	260	738	150	185	103	103
Teaching Hospital	2639	288	312	1271	227	259	79	203
Non-Teaching	1988	181	239	1063	172	29	90	214
Metropolitan Status								
Non-Metropolitan	12	0	3	5	2	0	0	2
Micropolitan	458	51	39	247	42	10	34	35
Metropolitan	5991	713	769	2820	505	463	238	483
Magnet Status								
Magnet Hospital	2780	350	388	1374	213	137	129	189
Non-Magnet Hospital	3681	414	423	1698	336	336	143	331

Table 3. Numbers and Percents of RNs by RN Characteristics and Unit Type

RN Characteristic	All Unit Types	Adult Critical Care	Adult Step- down	Adult Medical- Surgical	Obstetrics and Neonate	Peds	Peri- Op	Emergency
N (%)								
Gender								
Male	747 (12%)	151 (20%)	104 (13%)	308 (10%)	10 (2%)	27 (6%)	38 (14%)	109 (21%)
Female	5677 (88%)	611 (80%)	705 (87%)	2741 (89%)	537 (98%)	444 (94%)	234 (86%)	405 (78%)
Race								
White/Non -Hispanic	5070 (79%)	637 (83%)	629 (78%)	2342 (76%)	449 (82%)	401 (85%)	209 (77%)	403 (78%)
Nursing Education								
Diploma	63 (1%)	10 (1%)	9 (1%)	28 (1%)	2 (0.4%)	1 (0.2%)	1 (0.4%)	12 (2%)
ADN	2202 (34%)	175 (23%)	267 (33%)	1172 (38%)	171 (31%)	105 (22%)	116 (43%)	196 (38%)
BSN	4196 (65%)	579 (76%)	535 (66%)	1872 (61%)	376 (69%)	367 (78%)	155 (57%)	312 (60%)
Usual Shift								
Day	2466 (38%)	223 (29%)	328 (40%)	1238 (40%)	145 (26%)	138 (29%)	230 (85%)	164 (32%)
Evening	456 (7%)	32 (4%)	32 (4%)	209 (7%)	23 (4%)	18 (4%)	36 (13%)	106 (20%)
Night	2703 (42%)	360 (47%)	335 (41%)	1265 (41%)	320 (58%)	217 (46%)	2 (1%)	204 (39%)
No Shift	813 (13%)	148 (19%)	113 (14%)	350 (11%)	59 (11%)	97 (21%)	4 (2%)	42 (8%)
No Shift Rotation	4829 (75%)	543 (71%)	609 (75%)	2321 (76%)	433 (79%)	311 (66%)	232 (85%)	378 (73%)
Stay in current position	4845 (75%)	653 (86%)	571 (70%)	2113 (69%)	466 (86%)	390 (83%)	234 (86%)	418 (80%)

Table 4. Mean RN Characteristics by Unit Type

RN Characteristic	All Unit Types	Adult Critical Care	Adult Step- down	Adult Medical- Surgical	Obstetrics and Neonate	Pediatrics	Peri- Op	Emergency
Age	28.35	27.43	27.92	28.83	27.67	26.58	30.44	28.81
Quality of Care in general <sup>1</sup>	3.43	3.61	3.39	3.34	3.57	3.67	3.47	3.40
How much influence over schedule <sup>2</sup>	3.24	3.43	3.31	3.27	3.28	3.21	2.43	3.09
Adequate Orientation <sup>3</sup>	5.06	5.12	5.11	5.02	5.09	5.24	4.80	5.05
Satisfied with my job <sup>3</sup>	4.58	4.74	4.51	4.45	4.77	4.86	4.56	4.73

<sup>1</sup>Response options: poor (1), fair (2), good (3), excellent (4)

<sup>2</sup>Response options: very little (1), little (2), moderate (3), much (4), very much (5)

<sup>3</sup>Response options: strongly disagree (1), disagree (2), tend to disagree (3), tend to agree (4), agree (5), strongly agree (6)

Table 5. Quality of Care ANOVA Follow-up Tests

	Mean <sup>1</sup>	Standard Deviation	Pediatrics	Critical Care	OB	Peri- Op	ED	Step Down
Pediatrics	3.67	.506						
Critical Care	3.61	.535	NS					
OB	3.57	.568	NS	NS				
Perioperative	3.47	.582	*	*	NS			
ED	3.40	.597	*	*	*	NS		
Step Down	3.39	.606	*	*	*	NS	NS	
Medical-Surgical	3.34	.645	*	*	*	*	NS	NS

<sup>1</sup>Response options: poor (1), fair (2), good (3), excellent (4)

NS=non-significant

\*p<=.05

Table 6. Adequate Orientation ANOVA Follow-up Tests

	Mean <sup>1</sup>	Standard Deviation	Pediatrics	Critical Care	Step Down	OB	ED	Medical- Surgical
Pediatrics	5.24	.931						
Critical Care	5.12	1.008	NS					
Step Down	5.11	.999	NS	NS				
OB	5.09	1.006	NS	NS	NS			
ED	5.05	1.069	NS	NS	NS	NS		
Medical-Surgical	5.02	1.047	*	NS	NS	NS	NS	
Perioperative	4.80	1.166	*	*	*	*	*	*

<sup>1</sup>Response options: strongly disagree (1), disagree (2), tend to disagree (3), tend to agree (4), agree (5), strongly agree (6)

NS=non-significant

\*p<=.05

Table 7. Job Satisfaction ANOVA Follow-up Tests

	Mean <sup>1</sup>	Standard Deviation	Pediatrics	OB	Critical Care	ED	Peri- Op	Step Down
Pediatrics	4.86	.930						
OB	4.77	1.007	NS					
Critical Care	4.74	.977	NS	NS				
ED	4.73	.998	NS	NS	NS			
Perioperative	4.56	1.040	*	NS	NS	NS		
Step Down	4.51	1.047	*	*	*	*	NS	
Medical-Surgical	4.45	1.101	*	*	*	*	NS	NS

<sup>1</sup>Response options: strongly disagree (1), disagree (2), tend to disagree (3), tend to agree (4), agree (5), strongly agree (6)

NS=non-significant

\*p<=.05

Table 8. NLRN Intent to Stay (%) by Unit Type

Unit Type	Intent to Stay%
Perioperative	86 %
OB	86 %
Critical Care	86 %
Pediatrics	83 %
ED	80 %
Step Down	70 %
Medical-Surgical	69 %

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